

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

**Status of Claims**

Claims 1, 19, 24, 28, and 35 have been amended. Claims 1-7, 10-28 and 30-36 are currently pending in the application of which claims 1, 13, 19, 24, 30 and 35 are independent. Claim 8 was previously canceled and claims 9, 29 and 37 have been canceled herein without prejudice or disclaimer of the subject matter contained therein. Claims 13-18 and 30-34 were withdrawn from further consideration as being drawn to a nonelected invention.

No new matter has been introduced by way of the claim amendments. Entry thereof is therefore respectfully requested.

**Summary of the Office Action**

Claims 1, 6, 7, 9, 12, 24 and 35 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn et al. (U.S. 2002/0152293, hereinafter “Hahn”) in view of Busche (U.S. 5,805,593, hereinafter “Busche”).

Claims 2-5 and 25-27 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Aggarwal (U.S. 2004/0221154, hereinafter “Aggarwal”).

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Kumar (U.S. 2005/0122904, hereinafter “Kumar”).

Claims 19 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Oom Temudo de Castro et al. (U.S. 2005/0030904, hereinafter “Oom Temudo de Castro”), further in view of Cloonan (U.S. 5,345,444, hereinafter “Cloonan”).

Claims 20 and 23 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Oom Temudo de Castro.

Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Oom Temudo de Castro, further in view of Matsubara (U.S. 2004/0008687, hereinafter “Matsubara”).

Claims 28, 29, 36, and 37 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Busche and further in view of Aggarwal.

The aforementioned rejections are respectfully traversed for at least the reasons set forth below.

#### **Improper Rejections in the Office Action**

Claims 2-5 and 25-27 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Aggarwal. Claims 2-5 and 25-27 are dependent upon claims 1 and 24 respectively, both of which were rejected under Hahn in view of Busche. Thus, the rejection as to claims 2-5 and 25-27 is improperly lacking reference to the Busche reference.

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Kumar (U.S. 2005/0122904, hereinafter “Kumar”). Claims 10 and 11 are dependent upon claim 1, which was rejected under Hahn in view of

Busche. Thus, the rejection as to claims 10 and 11 is improperly lacking reference to the Busche reference.

Claims 20 and 23 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Oom Temudo de Castro. Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Oom Temudo de Castro, further in view of Matsubara. Claims 20-23 are dependent upon claim 19, which was under Hahn in view of Oom Temudo de Castro further in view of Cloonan. Thus, the rejection as to claims 20-23 is improperly lacking reference to the Cloonan reference.

### **Drawings**

The Office Action did not indicate whether the formal drawings filed with the application are accepted. Indication of acceptance of the drawings is requested.

### **Claim Rejections Under 35 U.S.C. § 103(a)**

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S.398, 82 USPQ2d 1385 (2007):

“Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, “[a]ll claim limitations must be considered” because “all words in a claim

must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S., 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness.”

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

- **Claims 1, 6, 7, 9, 12, 24 and 35**

Claims 1, 6, 7, 9, 12, 24 and 35 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hahn in view of Busche.

- o Independent claim 1

Independent claim 1 has been amended to incorporate the features of now-canceled dependent claim 9. As such, amended independent claim 1 now recites, *inter alia*, “applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes”. Support for the amendments to independent claim 1 may also be found on page 4, line 23-page 5, line 1 of the originally filed Specification.

As noted on page 11, lines 1-3, the Office Action correctly indicates that Hahn fails to disclose the features of now-canceled claim 9. In an effort to make up for this deficiency in Hahn, the Office Action asserts that Busche, at column 4, lines 10-15, discloses the step of applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service. *Office Action*, page 11, lines 4-7. More particularly, the Office Action asserts that it would have been obvious to combine Hahn based upon the alleged disclosure in Busche. The proposed combination of Hahn and Busche, however, fails to disclose at least the step of applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and

to further reduce the size of the set of candidate service nodes as claimed in independent claim 1.

Initially, Busche discloses a set-up procedure for setting up a service between an origination node and a destination node. Each node maintains a topological database of the network topology. The originating node sends a set-up message to a neighboring node. The neighboring node selects *a shortest path* to the destination node by eliminating links connected to nodes that have indicated a failure. *Busche*, Abstract. However, Busche merely identifies *the shortest path* by a k-shortest path algorithm that determines the shortest path to a destination node by *entries in a routing table* based on distance in column 4, lines 10-15. The claimed invention, on the other hand, applies a clustering algorithm to the plurality of service nodes to identify *a set of candidate service nodes* from the plurality of service nodes closest to a node requesting the service and *to further reduce the size of the set* of candidate service nodes. Thus, Busche merely identifies the one closest node to which a setup message will be sent, while the claimed invention identifies a set of candidate service nodes and then further reduces the size of the set of candidate nodes. *Busche*, column 4, lines 10-15.

At least for the foregoing reasons, Hahn and Busche, individually or in combination as suggested in the Office Action, fail to at least teach or suggest the above-mentioned features, as claimed in independent claim 1.

Accordingly, the Office Action has failed to establish that independent claim 1 is unpatentable over Hahn and Busche. The Examiner is thus respectfully requested to withdraw the rejection of independent claim 1 and the claims that depend therefrom and to allow all of these claims.

○ Independent claim 24

Independent claim 24 has been amended to incorporate the features of now-canceled dependent claim 9. As such, amended independent claim 24 recites, *inter alia*, “means for applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes.” Thus, claim 24 recites certain features similar to those recited in amended independent claim 1 above. Therefore, claim 24 is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to independent claim 1.

○ Independent claim 35

Independent claim 35 has been amended to incorporate the features of now-canceled dependent claim 9. As such, amended independent claim 35 recites, *inter alia*, “applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes.” Thus, claim 35 recites certain features similar to those recited in amended independent claim 1 above. Therefore, claim 35 is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to independent claim 1.

○ Dependent claims 6, 7, 9 and 12

Claim 9 has been canceled and therefore the rejection to canceled claim 9 has been rendered moot.

Claims 6, 7 and 12 are dependent from independent claim 1. Thus, claims 6, 7 and 12 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 1 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 6, 7 and 12 be withdrawn, and these dependent claims be allowed.

- **Claims 2-5 and 25-27**

Claims 2-5 and 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Aggarwal.

- Dependent claims 2-5

Claims 2-5 are dependent from independent claim 1. Thus, claims 2-5 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 1 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 2-5 be withdrawn, and these dependent claims be allowed.

- Dependent claims 25-27

Claims 25-27 are dependent from independent claim 24. Thus, claims 25-27 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 24 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 25-27 be withdrawn, and these dependent claims be allowed.



- **Claims 10-11**

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Kumar.

- Dependent claims 10 and 11

Claims 10 and 11 are dependent from independent claim 1. Thus, claims 10 and 11 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 1 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 10 and 11 be withdrawn, and these dependent claims be allowed.

- **Claim 19**

Claims 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Oom Temudo de Castro, further in view of Cloonan.

- Independent claim 19

Independent claim 19 has been amended to incorporate the features of now-canceled dependent claim 9. As such, amended independent claim 19 recites, *inter alia*, “applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes”. Thus, claim 19 recites certain features similar to those recited in amended independent claim 1 above. Therefore, claim 19

is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to independent claim 1. Moreover, neither Oom Temudo de Castro nor Cloonan make up for the deficiencies noted above in Hahn and Busche.

- **Claims 20 and 23**

Claims 20 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Oom Temudo de Castro.

- *Dependent claims 20 and 23*

Claims 20 and 23 are dependent from independent claim 19. Thus, claims 20 and 23 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 19 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 20 and 23 be withdrawn, and these dependent claims be allowed.

- **Claims 21 and 22**

Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Oom Temudo de Castro, further in view of Matsubara.

- *Dependent claims 21 and 22*

Claims 21 and 22 are dependent from independent claim 19. Thus, claims 21 and 22 are also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 19 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 21 and 22 be withdrawn, and these dependent claims be allowed.

- **Claims 28, 29, 36 and 37**

Claims 28, 29, 36, and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hahn in view of Busche and further in view of Aggarwal.

- Dependent claims 28 and 29

Claim 29 has been canceled and therefore the rejection to canceled claim 29 has been rendered moot.

Claim 28 is dependent from independent claim 24. Thus, claim 28 is also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 24 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claim 28 be withdrawn, and these dependent claims be allowed.

- Dependent claims 36 and 37

Claim 37 has been canceled and therefore the rejection to canceled claim 37 has been rendered moot.

Claim 36 is dependent from independent claim 35. Thus, claim 36 is also believed to be allowable over the cited documents of record for at least the same reasons as set forth to independent claim 35 above.

**PATENT**

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In view of the foregoing, it is therefore respectfully requested that the rejection of claim 36 be withdrawn, and these dependent claims be allowed.

**Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to Deposit Account No. 08-2025.

Respectfully submitted,

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